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Comments on the draft "Programmatic Preliminary Remediation Goals".

PAGE 2, First Paragraph.

This paragraph describes 10^{-4} to the 10^{-6} risk level PRGs which is appropriate for the chemical/radionuclide carcinogens. There are no instructions for non-carcinogen chemical toxicants. Add a second paragraph, as below.

For non-carcinogenic chemical toxicants, a total hazard index (HI) of 1.0 is the proposed starting point for the preliminary remedial goals. The PRG can be amended depending upon the number of sources of the specific chemical of concern contributing to the HI. For example, if the HI for the Barium exposure is 1.0. This indicates the ratio of the total HQs from each pathway to the reference dose is unity. If ground water ingestion, suspended air particulate ingestion and dermal exposure contribute individual HQs of 0.3, 0.3, and 0.3 to the total HI of 0.9, those levels are acceptable because the total HI is less than 1.0 and no remediation would be required. However, if each paths' HQ was 1.0, equal to a total HI of 3.0, that's unacceptable and each or all source paths must be examined for possible remedy to reduce the HI down to a total of no more than 1.0. If five pathways contribute to an HI of 1.0, then the starting point would be to examine the contribution of each path. If it did not contribute more than 0.2 to the total HI of 1.0, no remedy required. If they are greater than each path is examined further to identify where the most remediation is needed. If only two sources are contributing to the total HI hazard of 1.0, (exple., 0.5/0.5, 0.3/0.7, 0.6/0.4 etc.), than each source pair would be acceptable since they meet the HI of 1.0. This process can be varied and used for an individual operable unit or for the site wide remedial goals.

Bullet#4

The baseline risk assessment identifies the chemical, the source and the area which is above the acceptable risk level and defines areas where remediaton is required. The risk values (Cancer risk of more than 10^{-6} or a HI of greater than 1.0) indicate where clean up is required. Preliminary remedial goals are the target levels which we hope to acheive by applying remedial alternatives. The PPRGs do not help to decide where action is needed but establish the objective of remedial actions.

Page 3, Section 2. Par 2. Last line.

Final remediation goals will be detemined etc., etc. Change to;
Preliminary remediation goals will be modified as appropriate, presented in the

approved work plan for remediation and presented as Final Remediation Levels (no longer goals) for the record of decision (ROD).

Page 4, Par 1. Line 4.

Define what is "low detection frequency" and provide justification for usage.

Table 4.

Surface soil-gamma shielding factor of 0.2 (20%) reflects an attenuation of direct radiation from structures that absorb direct radiation. Previous experience has indicated a shielding factor of 0.5 is acceptable for residential house attenuation exposures. Regardless of which number is used, the total exposure should be adjusted for time spent inside the house and outside the house, when calculating the total exposure dose both for the child and adult. Each has different exposure parameters.

Table 11.

Inhalation rates will vary among individual receptors according to the level of activity. A construction worker should have a higher inhalation rate than a residential adult or the eco-researcher. The rates in the tables should be adjusted to identify individual physiological conditions.